FIG. 1

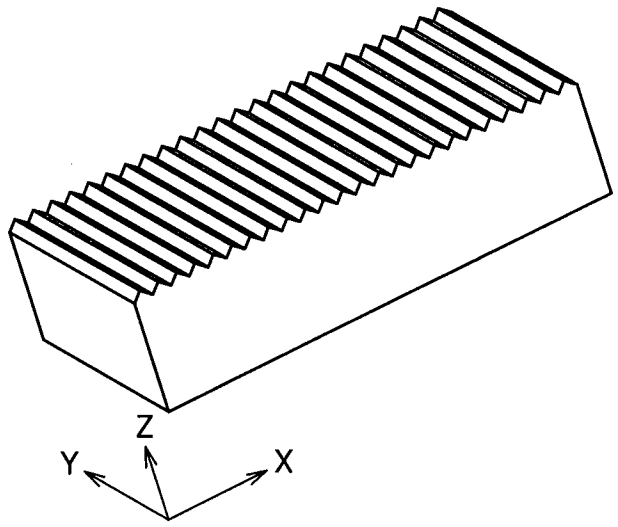


FIG. 2

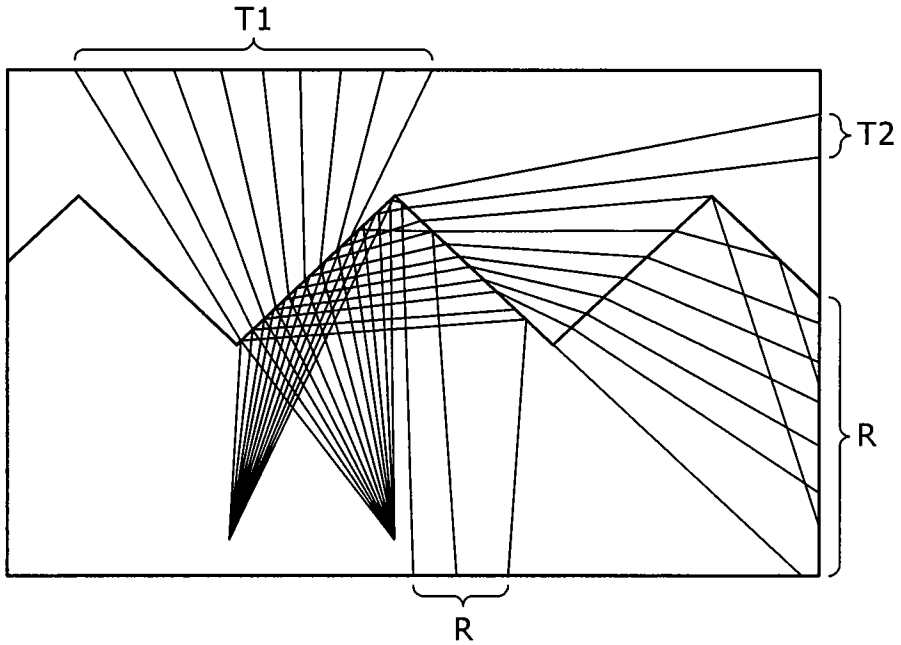


FIG. 3

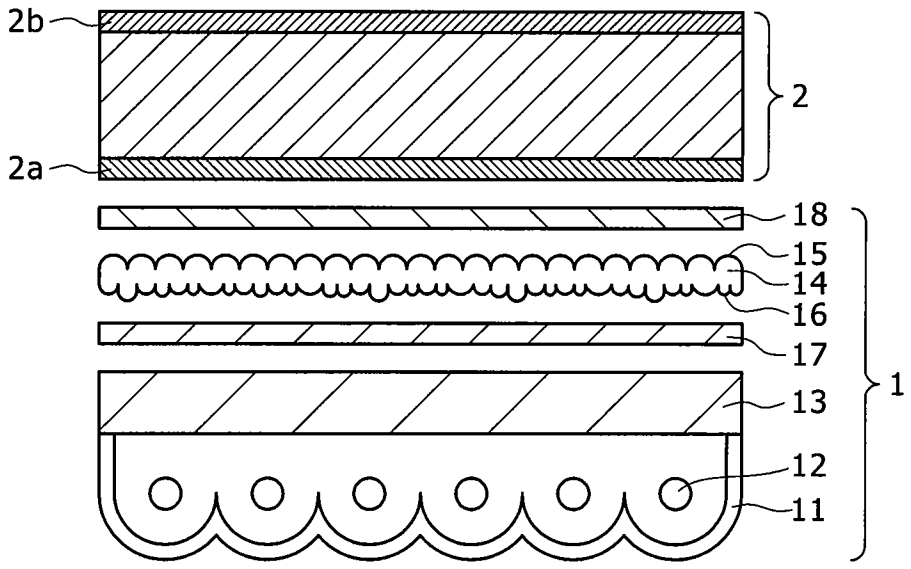


FIG. 4

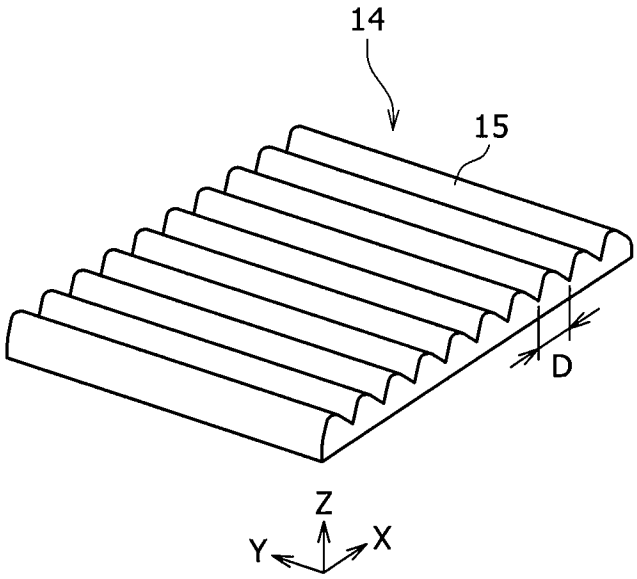


FIG. 5

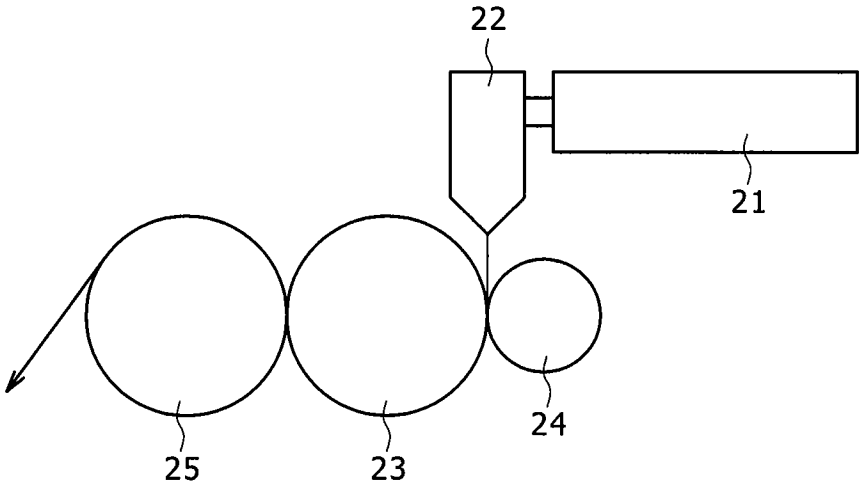


FIG. 6

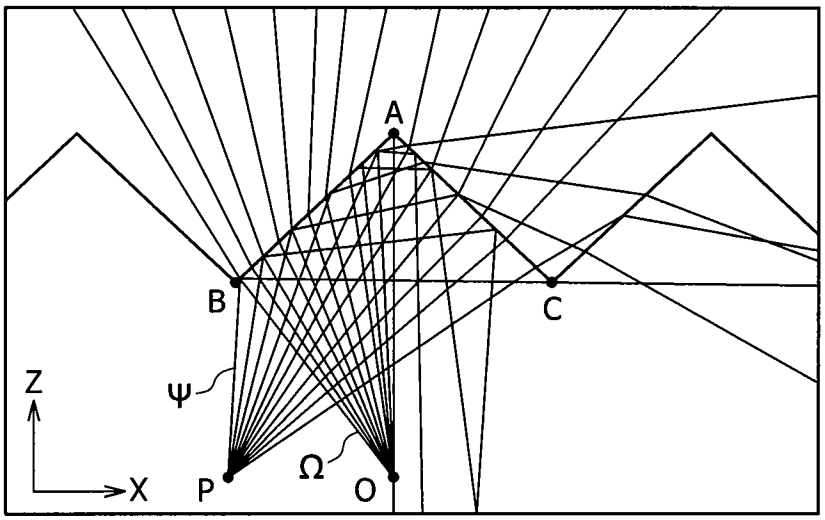


FIG. 7

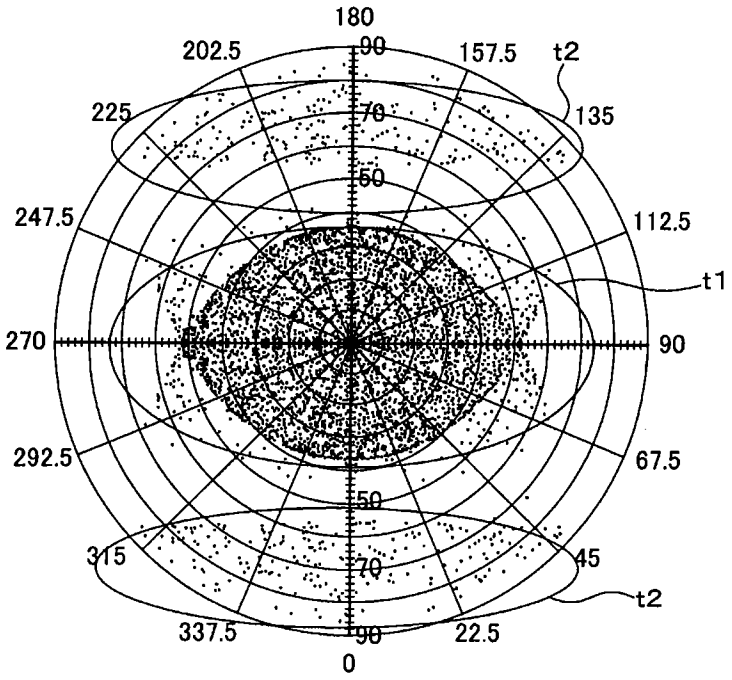

180
90
202.5
157.5
t2
225
70
135
50
247.5
112.5
t1
270
90
292.5
67.5
50
315
70
45
t2
337.5
90
22.5
0

FIG. 8

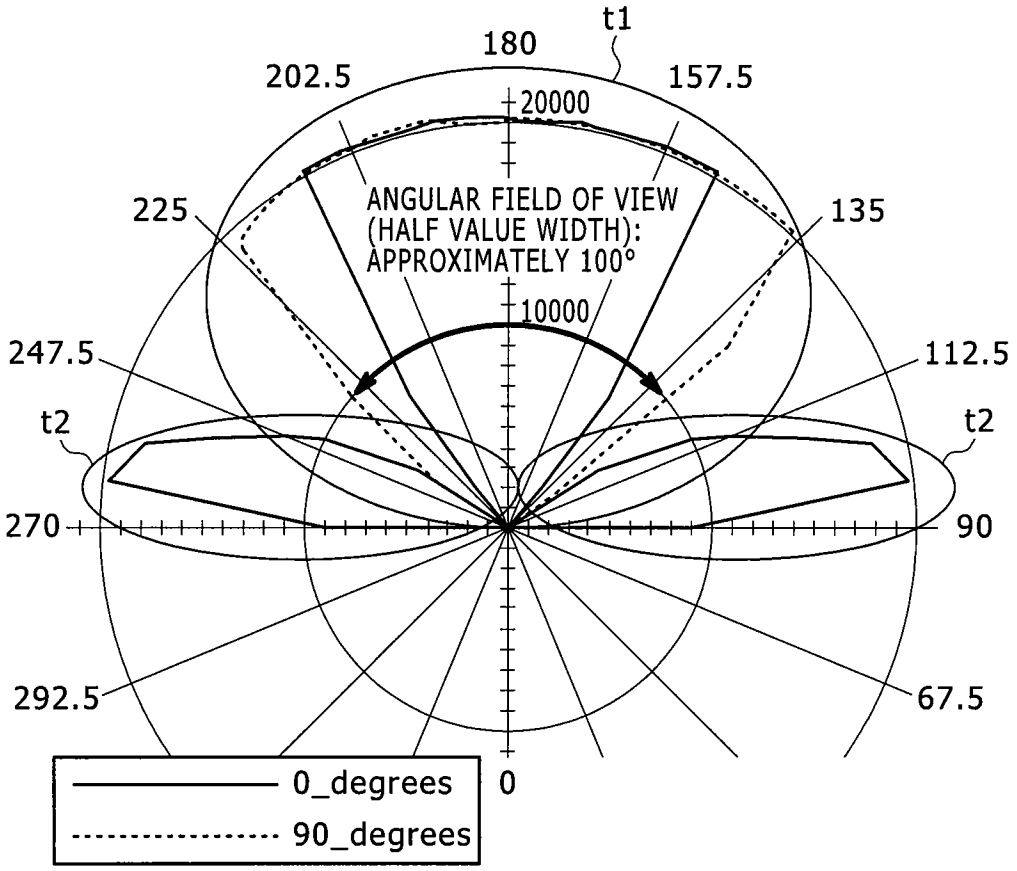

t1
180
202.5
157.5
20000
ANGULAR FIELD OF VIEW
(HALF VALUE WIDTH):
APPROXIMATELY 100°
225
135
10000
247.5
112.5
t2
t2
270
90
292.5
67.5
0
0_degrees
90_degrees

FIG. 9

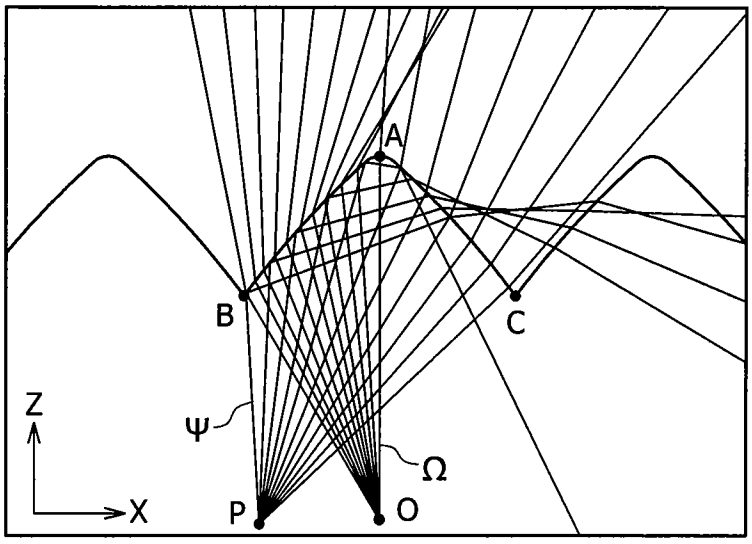


FIG. 10

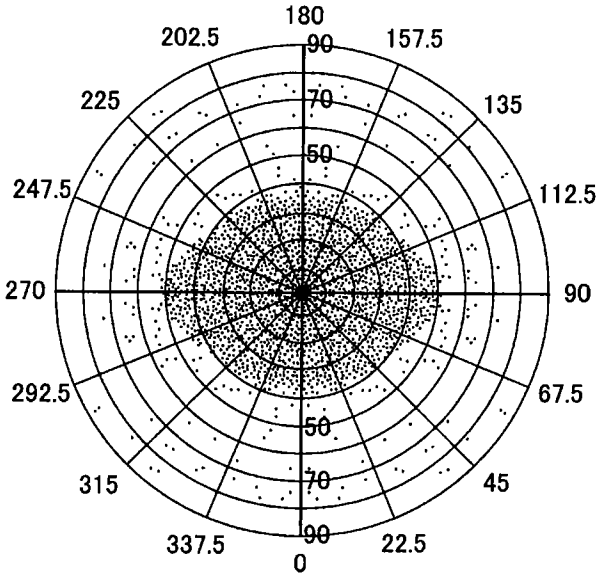

180
202.5
157.5
225
135
247.5
112.5
270
90
292.5
67.5
315
45
337.5
22.5
0
90
70
50
50
70
90

FIG. 11

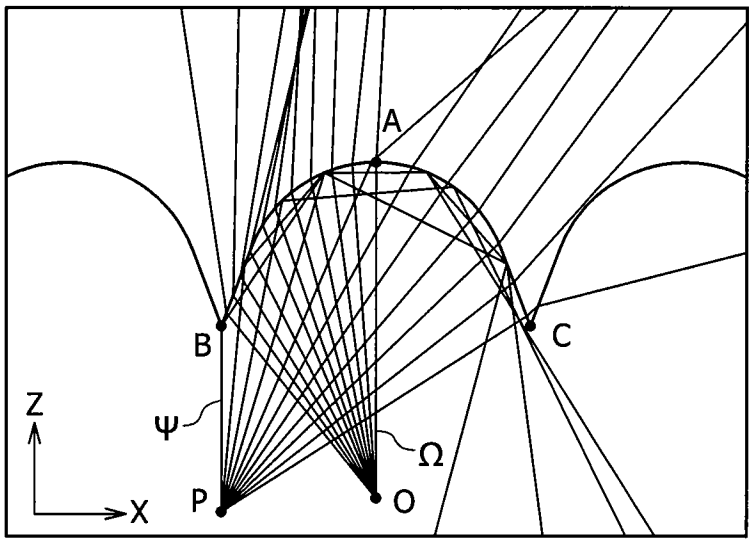


FIG. 12

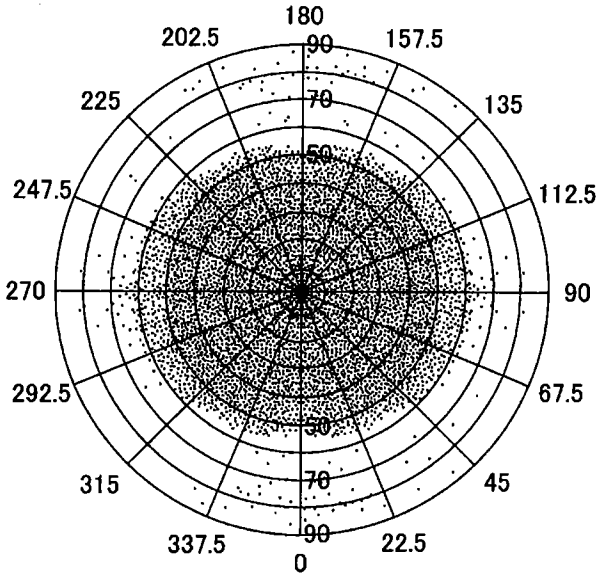

180
157.5
135
112.5
90
67.5
45
22.5
0
337.5
315
292.5
270
247.5
225
202.5
90
70
50
50
70
90

FIG. 13

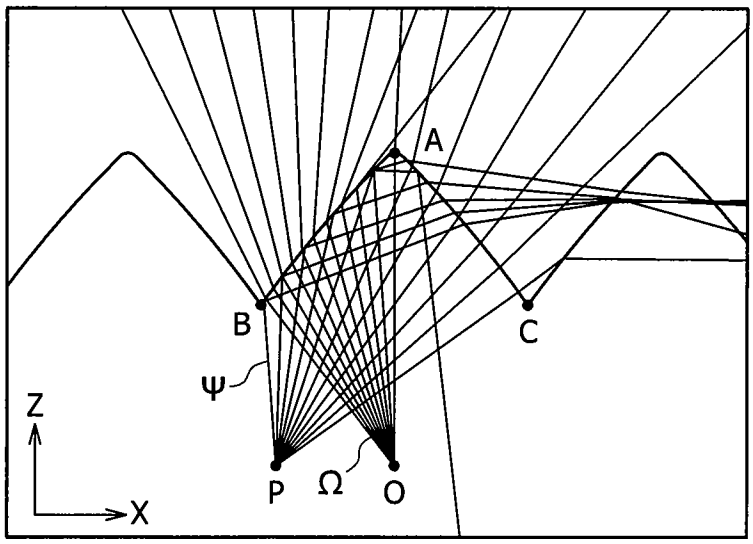


FIG. 14

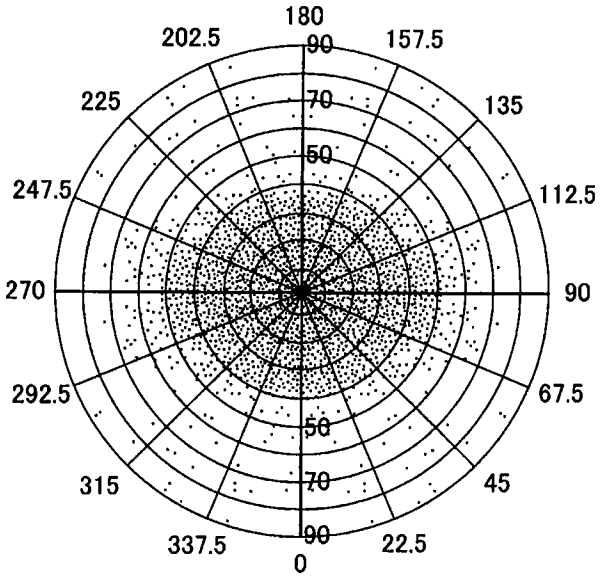

180
202.5
157.5
225
135
247.5
112.5
270
90
292.5
67.5
315
45
337.5
22.5
0
90
70
50
50
70
90

FIG. 15

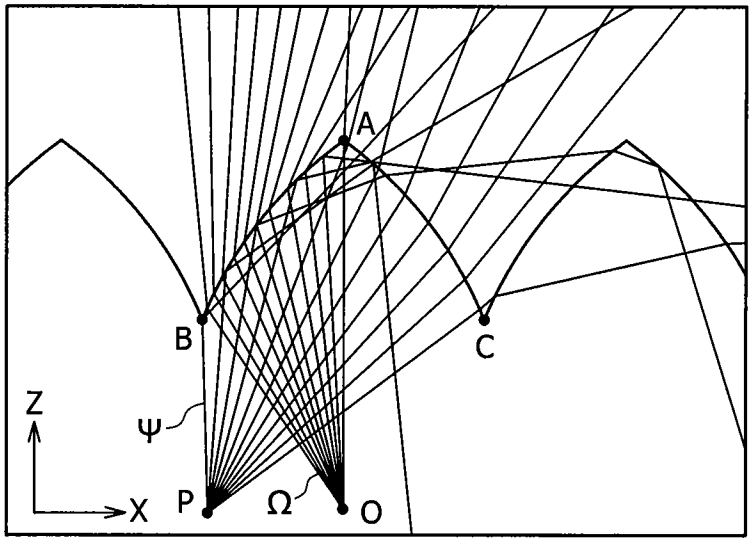


FIG. 16

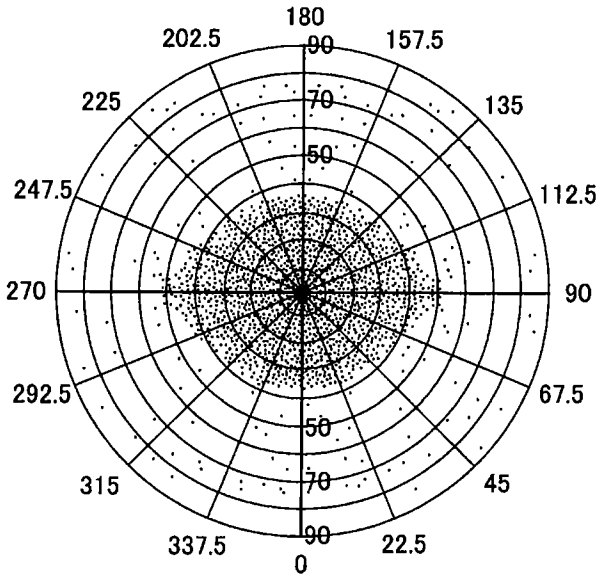

180
202.5
157.5
225
135
247.5
112.5
270
90
292.5
67.5
315
45
337.5
22.5
0
90
70
50
50
70
90

FIG. 17

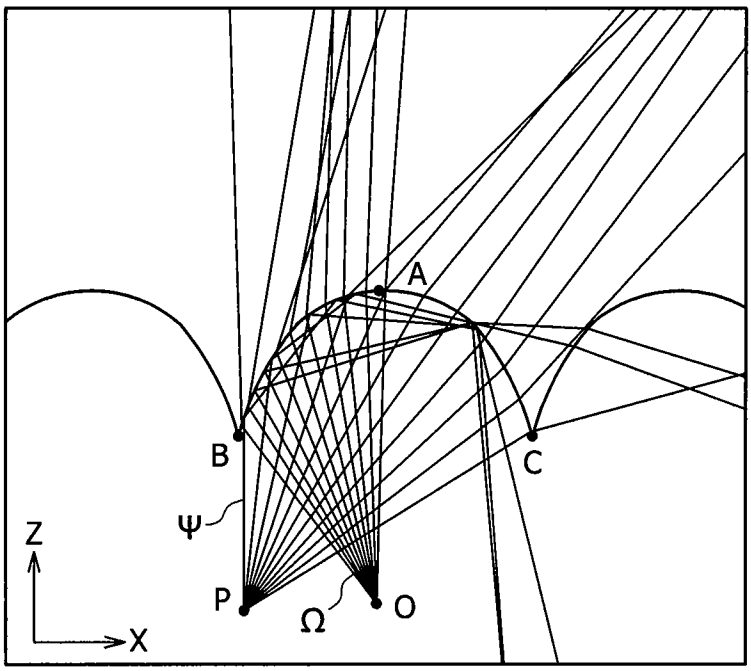


FIG. 18

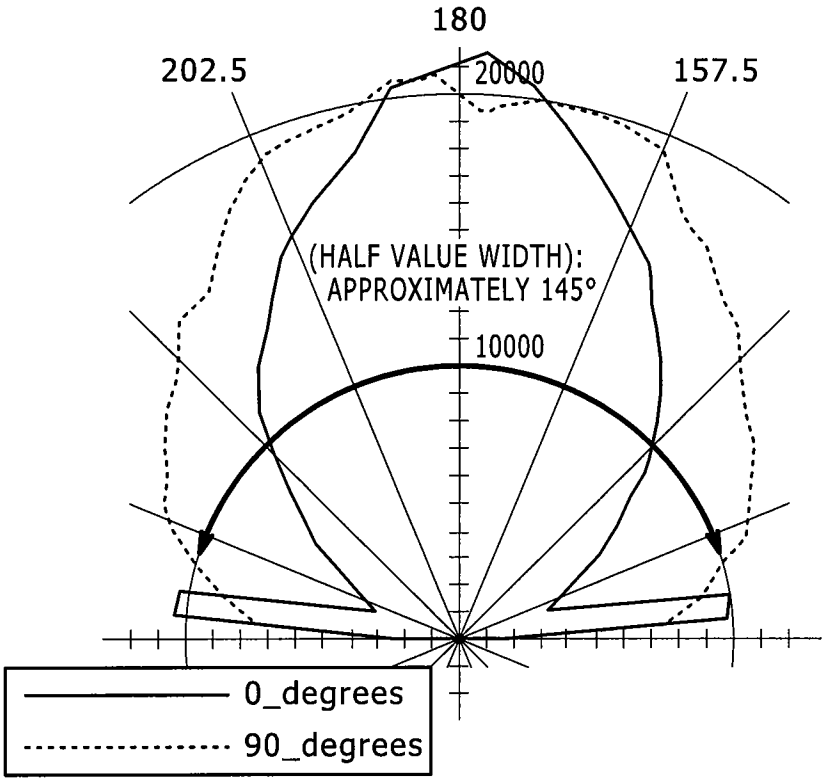

180
202.5
20000
157.5
(HALF VALUE WIDTH):
APPROXIMATELY 145°
10000
0_degrees
90_degrees

FIG. 19

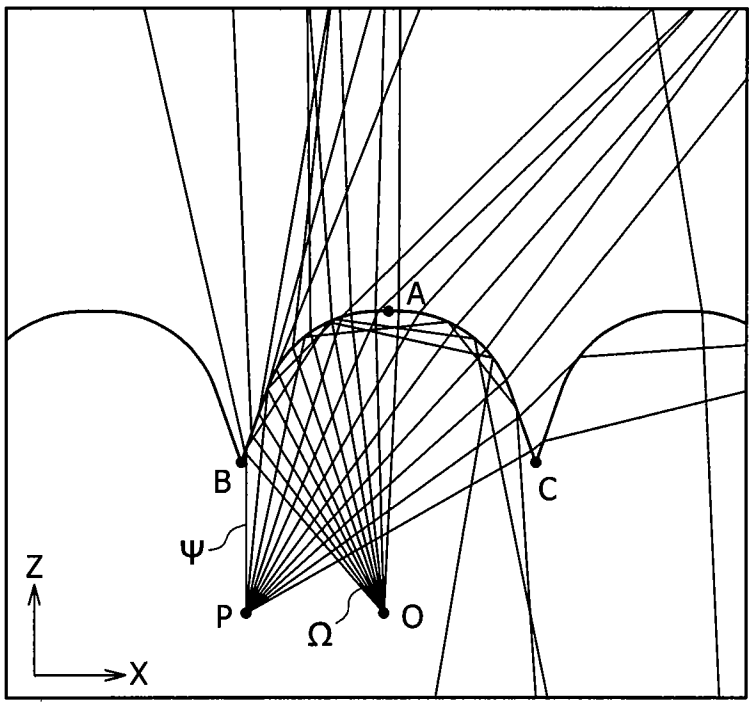


FIG. 20

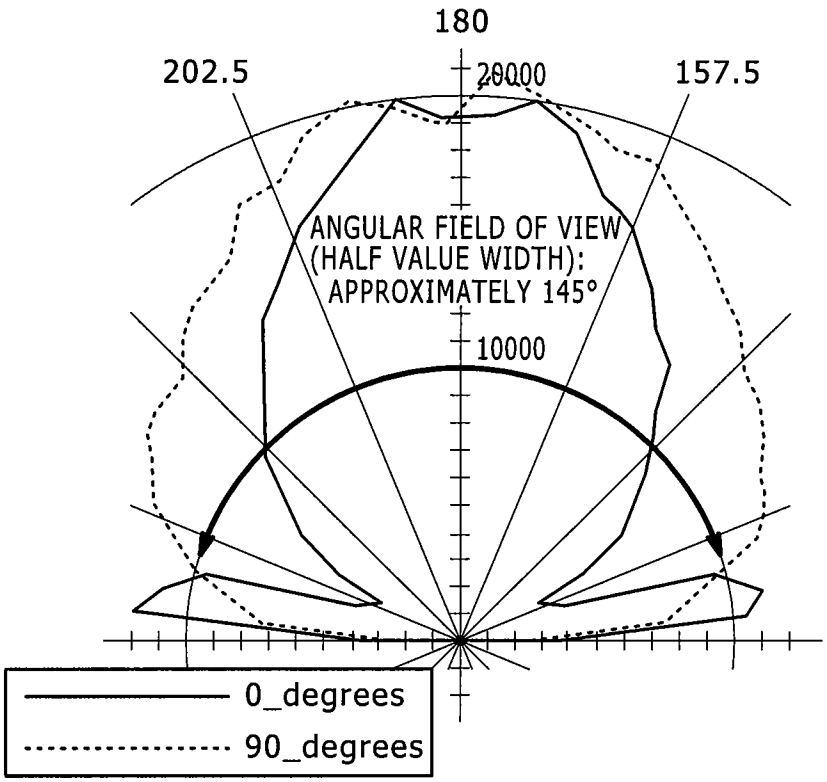

180
202.5
20000
157.5
ANGULAR FIELD OF VIEW
(HALF VALUE WIDTH):
APPROXIMATELY 145°
10000
0_degrees
90_degrees

FIG. 21

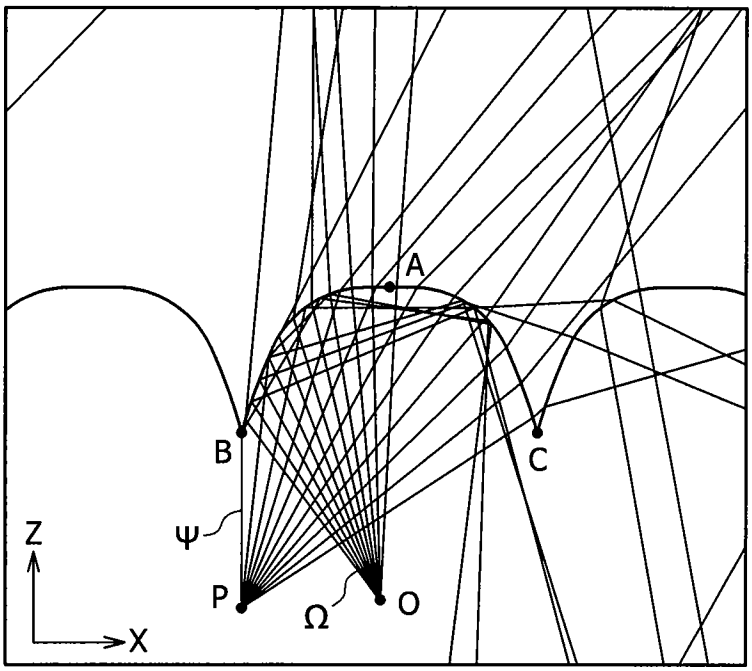


FIG. 22

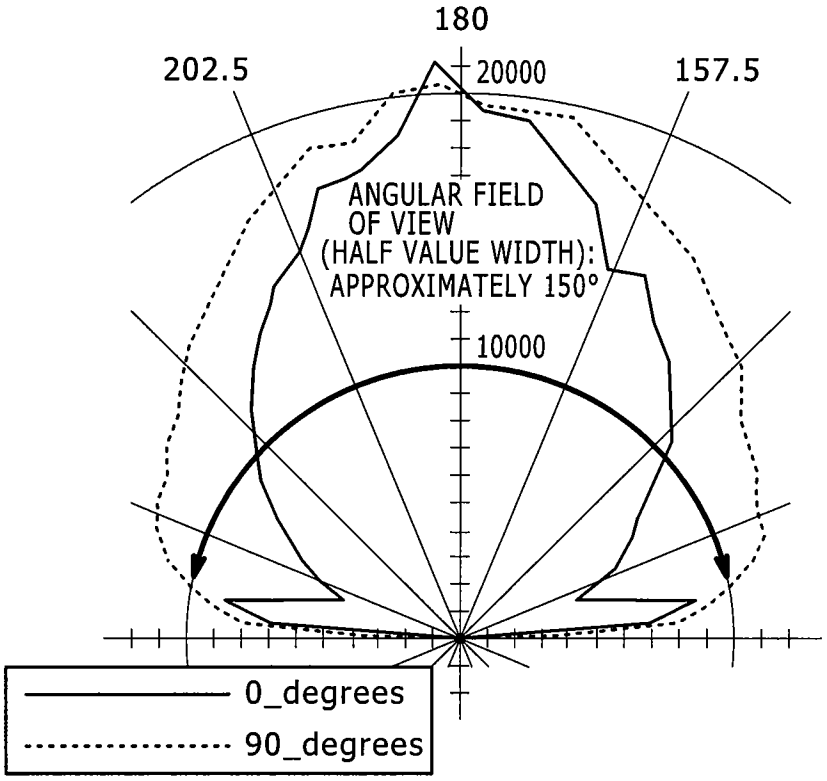

180
202.5
20000
157.5
ANGULAR FIELD
OF VIEW
(HALF VALUE WIDTH):
APPROXIMATELY 150°
10000
0_degrees
90_degrees

FIG. 23

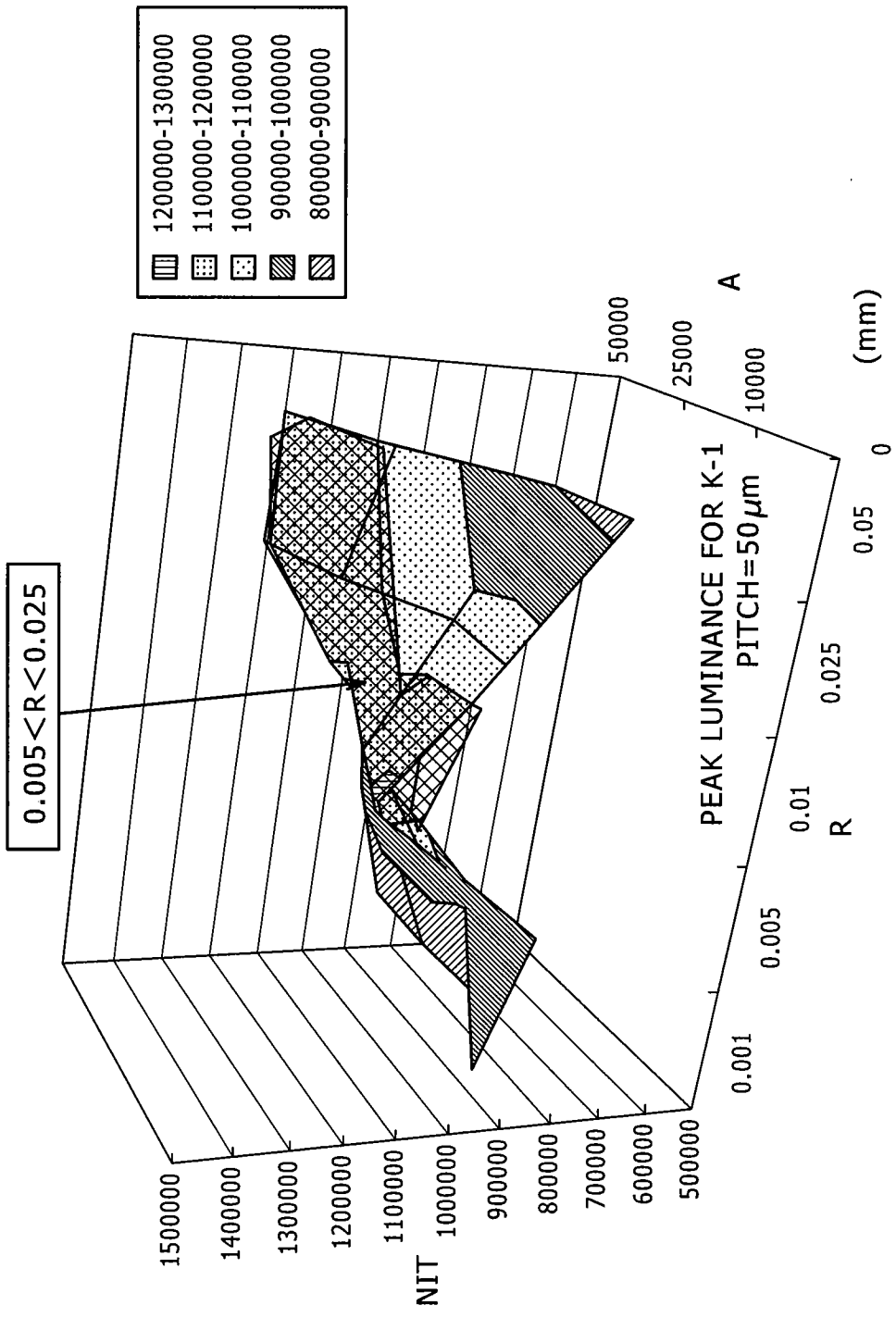

0.005<R<0.025
1200000-1300000
1100000-1200000
1000000-1100000
900000-1000000
800000-900000
NIT
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
0.001
0.005
0.01
0.025
0.05
R
PEAK LUMINANCE FOR K-1
PITCH=50μm
50000
25000
10000
0
A
(mm)

FIG. 24

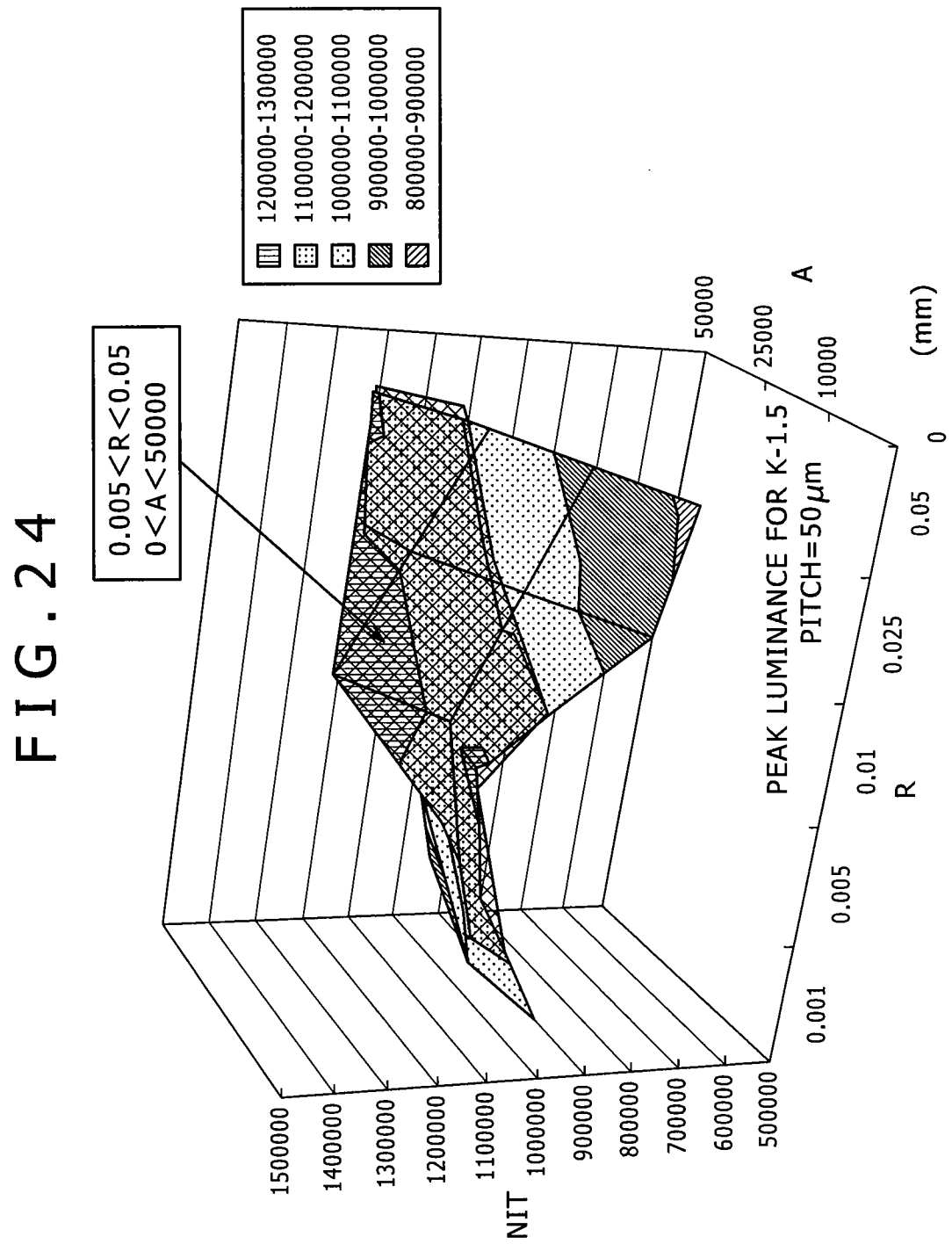

0.005<R<0.05
0<A<50000
1200000-1300000
1100000-1200000
1000000-1100000
900000-1000000
800000-900000
NIT
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
PEAK LUMINANCE FOR K-1.5
PITCH=50μm
R
0.001
0.005
0.01
0.025
0.05
0 (mm)
A
50000
25000
10000

FIG. 25

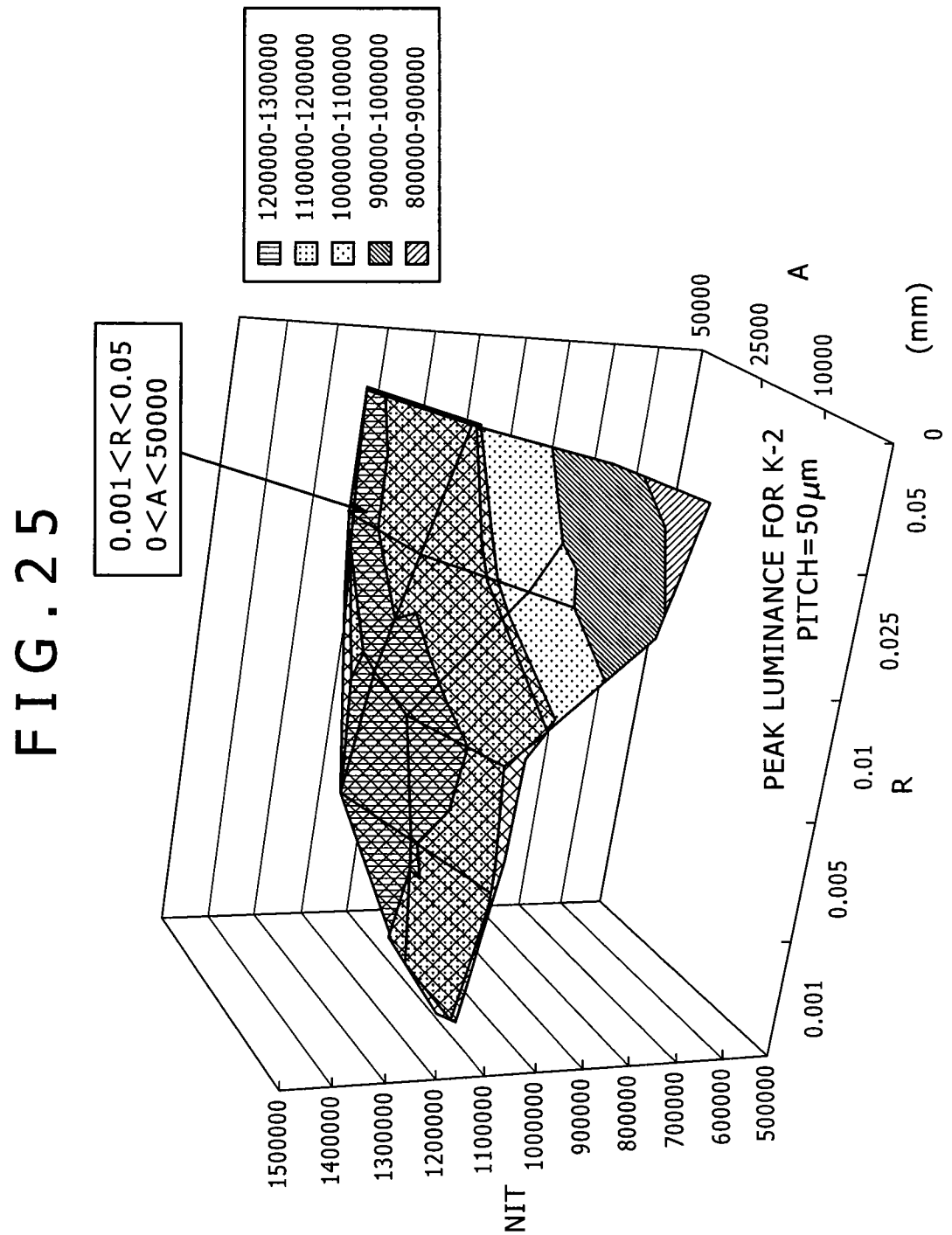

0.001<R<0.05
0<A<50000
1200000-1300000
1100000-1200000
1000000-1100000
900000-1000000
800000-900000
NIT
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
PEAK LUMINANCE FOR K-2
PITCH=50μm
R
0.001
0.005
0.01
0.025
0.05
(mm)
A
50000
25000
10000
0

FIG. 28

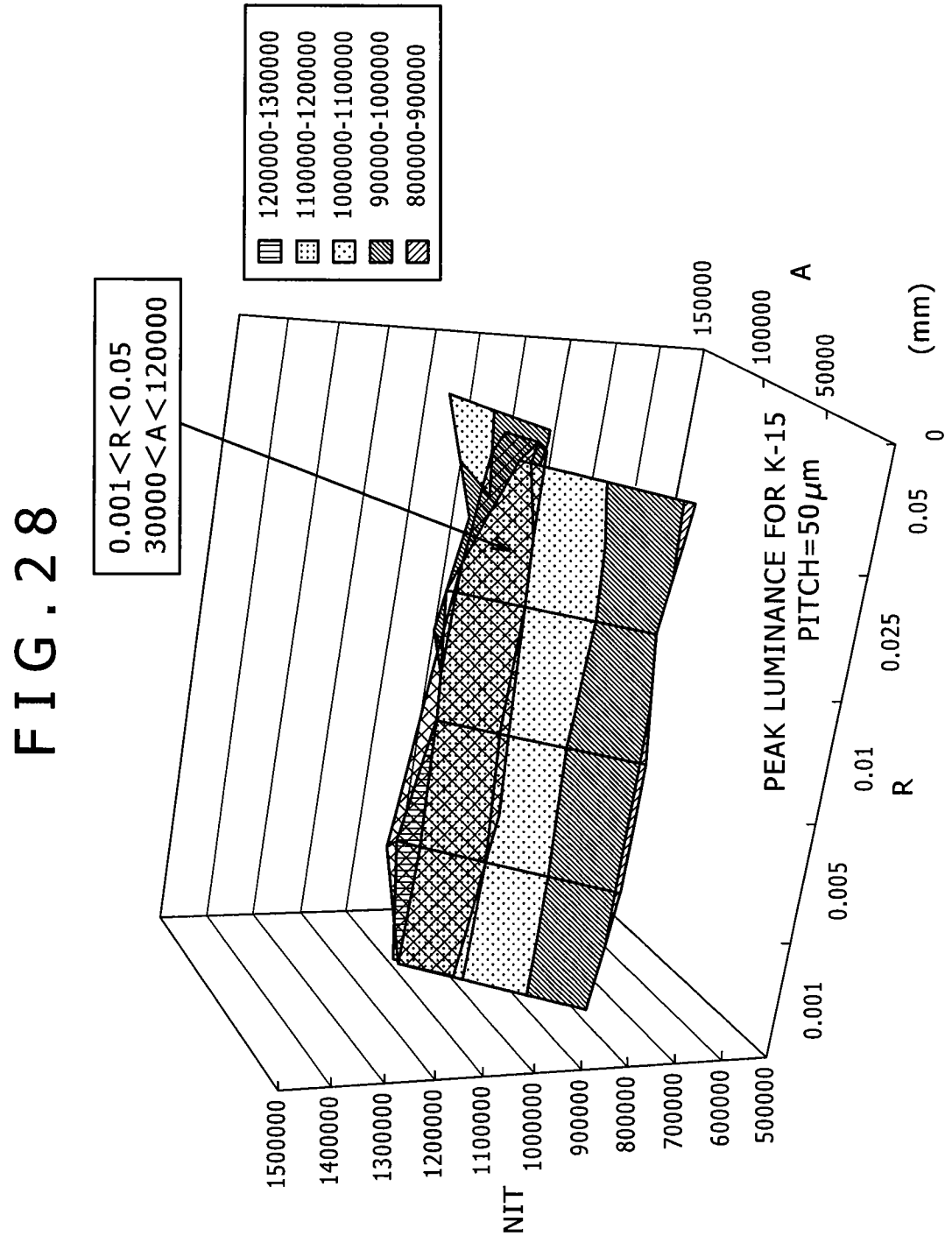

0.001<R<0.05
30000<A<120000
1200000-1300000
1100000-1200000
1000000-1100000
900000-1000000
800000-900000
NIT
1500000
1400000
1300000
1200000
1100000
1000000
900000
800000
700000
600000
500000
0.001
0.005
0.01
0.025
0.05
0
R
(mm)
PEAK LUMINANCE FOR K-15
PITCH=50μm
A
150000
100000
50000

FIG.30

WORKING EXAMPLE	0.20 μm CONVEX PORTION NUMBER (/mm^2)	0.20 μm CONVEX PORTION DISTANCE (μm)	Rz (μm)	HEIGHT AT CONVEX PORTION 1% AREA (μm)	COEFFICIENT OF DYNAMIC FRICTION (−)	FRONT FACE LUMINANCE RELATIVE VALUE (%)	SLIDING TEST DETERMINATION (−)	PRESENCE/ABSENCE OF EXTERNAL APPEARANCE BLURRING (−)
15	10	320	0.6	0.27	0.30	100	1	PRESENCE
16	579	41	23.4	10.2	0.26	70	3	ABSENCE
17	59	127	0.6	0.393	0.29	94	1	PRESENCE
18	127	92	8.1	3.45	0.26	98	3	ABSENCE
19	853	34	16.5	7.71	0.27	69	3	ABSENCE
20	352	55	2.8	1.134	0.23	98	2	ABSENCE
21	387	43	19.2	9.67	0.25	77	3	ABSENCE
22	390	54	5.1	1.99	0.26	95	2	ABSENCE
23	72	118	1.3	3.308	0.29	99	2	ABSENCE
24	85	109	9.4	5.32	0.27	98	3	ABSENCE
25	140	85	5.4	3.23	0.26	87	3	ABSENCE

FIG. 31

WORKING EXAMPLE	HAZE (%)	δa (red)
22	1	0.0023
23	85.5	0.4352
24	14.9	0.0442
25	13.7	0.0733
26	93.2	0.4880
27	11	0.0522
28	80.7	0.3701
29	35.1	0.1067
30	5.8	0.0245
31	33.6	0.1023
32	22.3	0.0738

FIG. 32

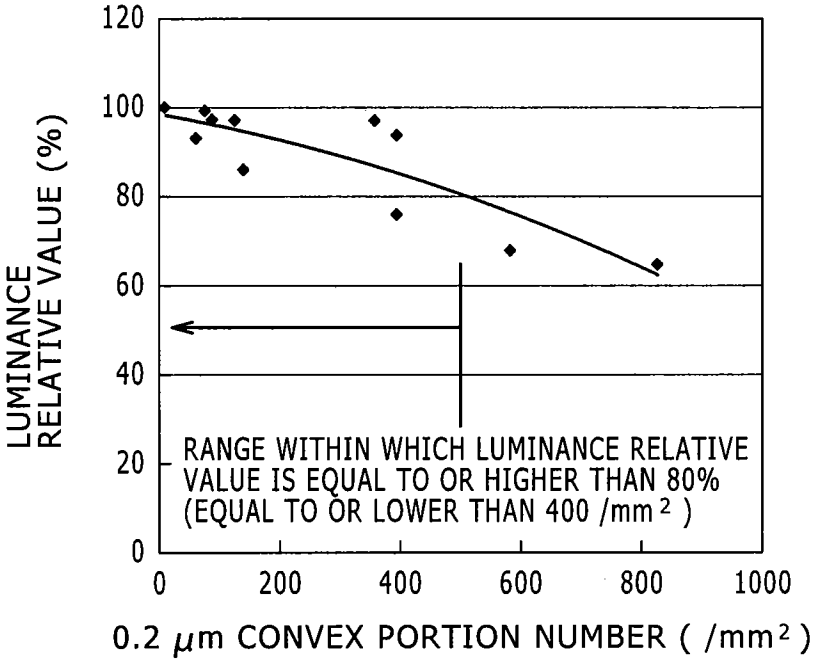

120
100
80
60
40
20
0
LUMINANCE RELATIVE VALUE (%)
RANGE WITHIN WHICH LUMINANCE RELATIVE VALUE IS EQUAL TO OR HIGHER THAN 80% (EQUAL TO OR LOWER THAN 400 /mm2)
0
200
400
600
800
1000
0.2 μm CONVEX PORTION NUMBER (/mm2)

FIG. 33

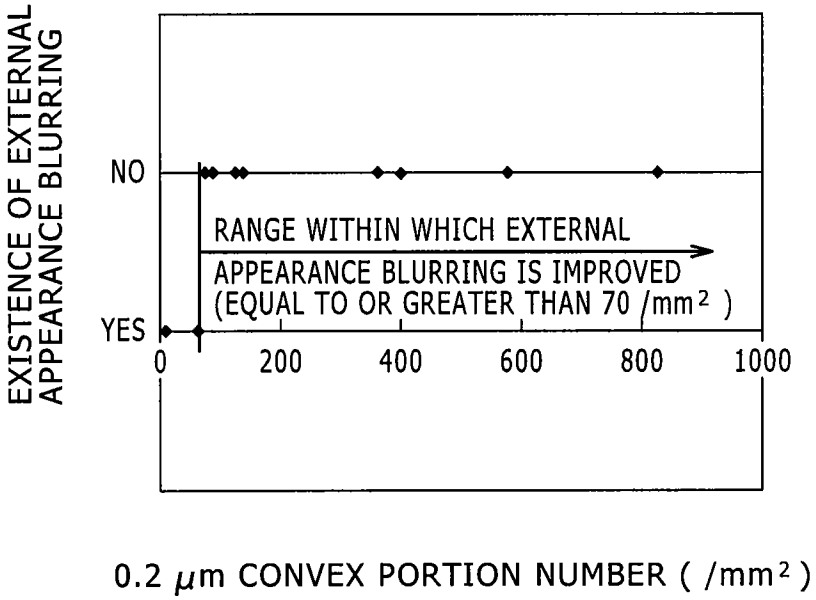

EXISTENCE OF EXTERNAL APPEARANCE BLURRING
NO
YES
RANGE WITHIN WHICH EXTERNAL APPEARANCE BLURRING IS IMPROVED (EQUAL TO OR GREATER THAN 70 /mm2)
0
200
400
600
800
1000
0.2 μm CONVEX PORTION NUMBER (/mm2)

FIG. 34

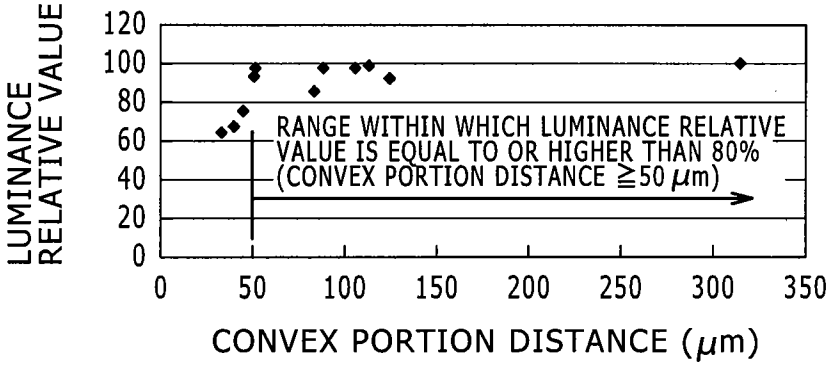


FIG. 35

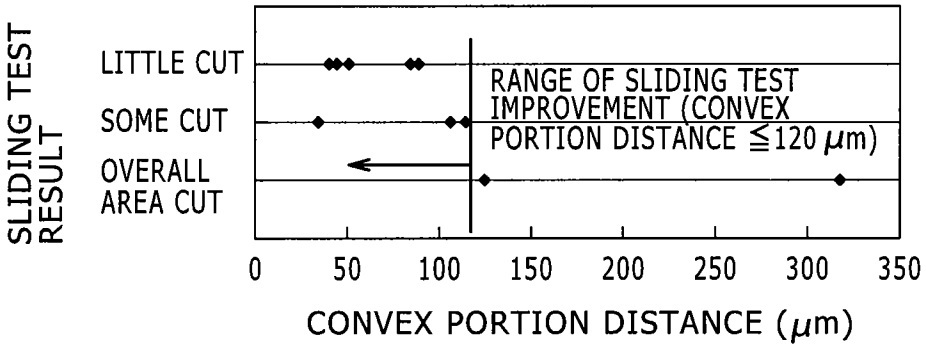


FIG. 36

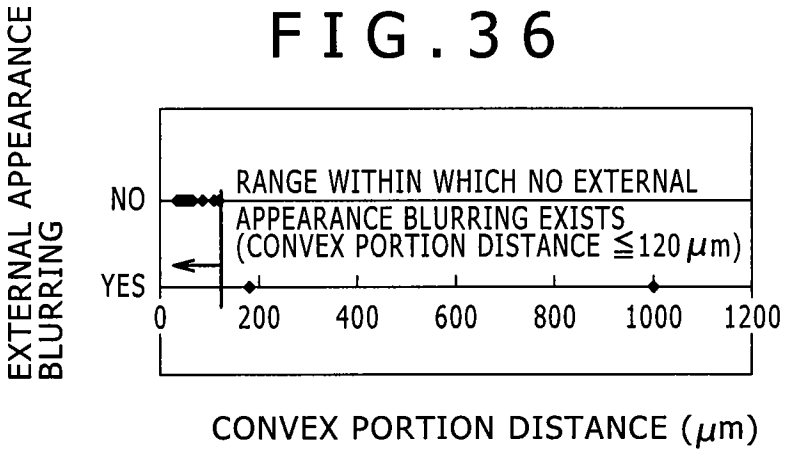


FIG. 37

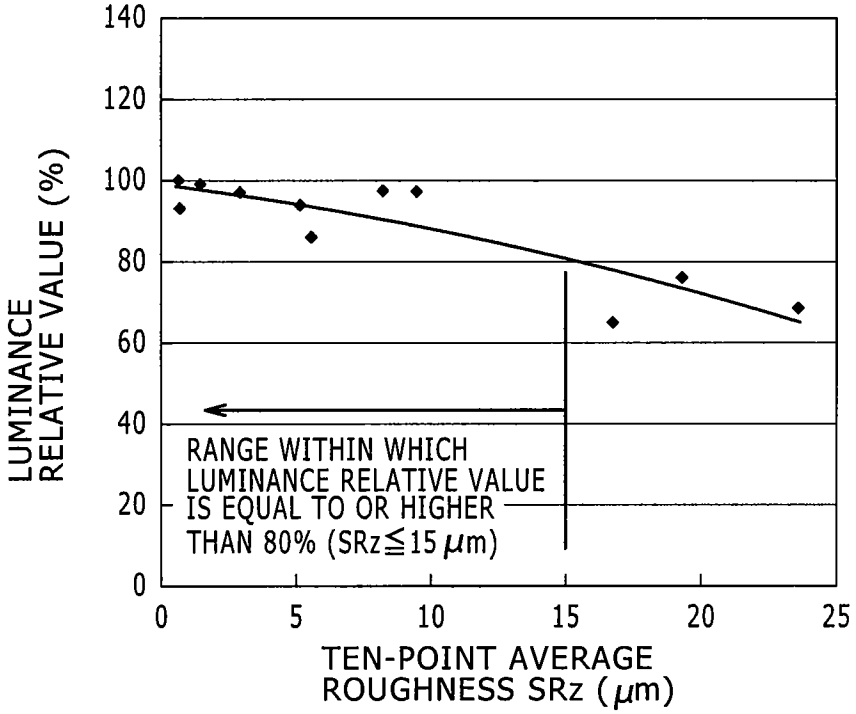

140
120
100
80
60
40
20
0
LUMINANCE RELATIVE VALUE (%)
RANGE WITHIN WHICH LUMINANCE RELATIVE VALUE IS EQUAL TO OR HIGHER THAN 80% (SRz≦15 μm)
0
5
10
15
20
25
TEN-POINT AVERAGE ROUGHNESS SRz (μm)

FIG. 38

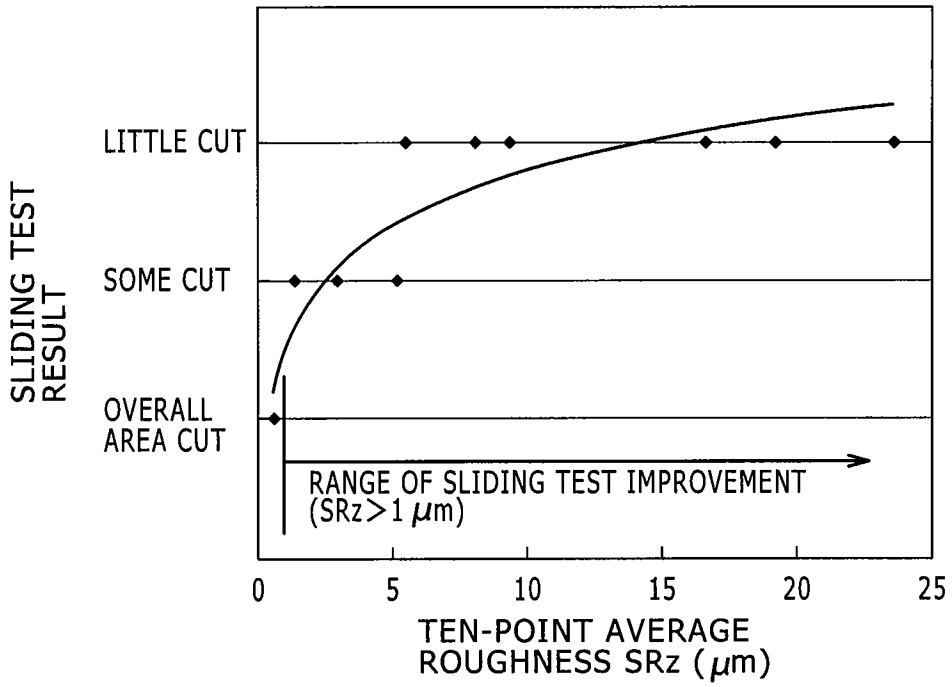

SLIDING TEST RESULT
LITTLE CUT
SOME CUT
OVERALL AREA CUT
RANGE OF SLIDING TEST IMPROVEMENT (SRz>1 μm)
0
5
10
15
20
25
TEN-POINT AVERAGE ROUGHNESS SRz (μm)

FIG. 39

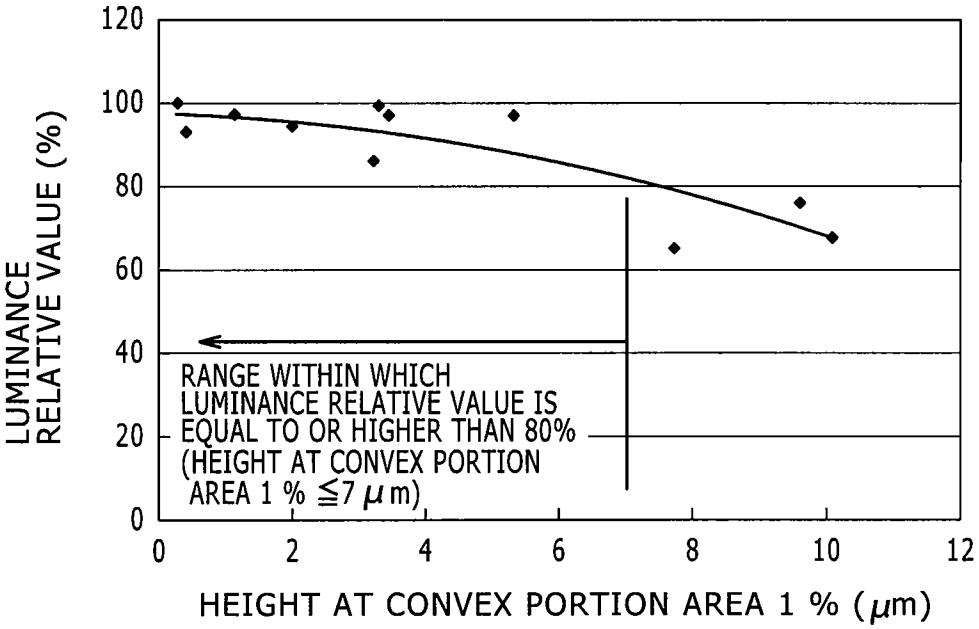

120
100
80
60
40
20
0
LUMINANCE RELATIVE VALUE (%)
RANGE WITHIN WHICH LUMINANCE RELATIVE VALUE IS EQUAL TO OR HIGHER THAN 80% (HEIGHT AT CONVEX PORTION AREA 1 % ≦7 μm)
0
2
4
6
8
10
12
HEIGHT AT CONVEX PORTION AREA 1 % (μm)

FIG. 40

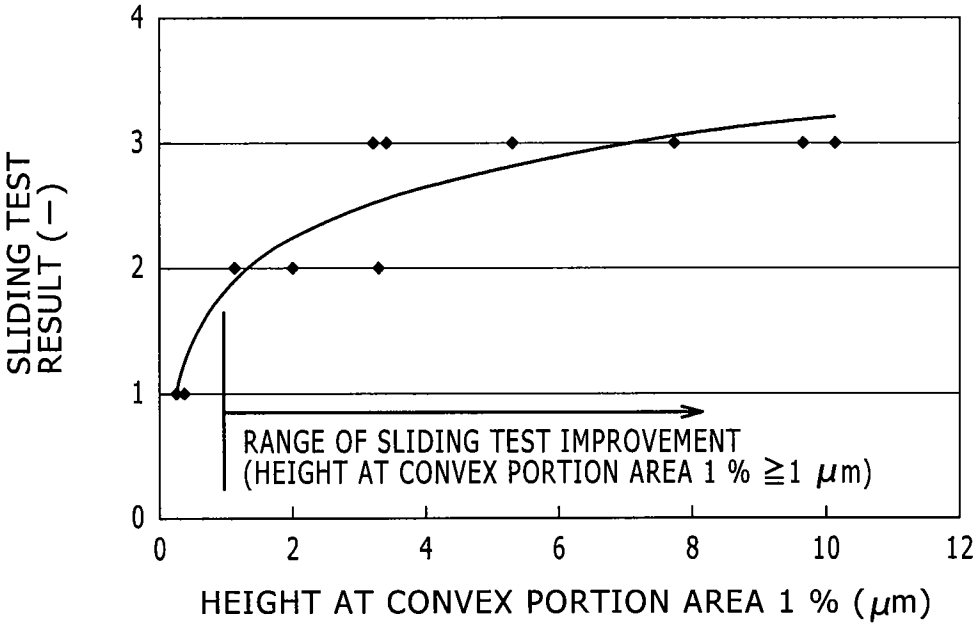

4
3
2
1
0
SLIDING TEST RESULT (−)
RANGE OF SLIDING TEST IMPROVEMENT (HEIGHT AT CONVEX PORTION AREA 1 % ≧1 μm)
0
2
4
6
8
10
12
HEIGHT AT CONVEX PORTION AREA 1 % (μm)

FIG. 41

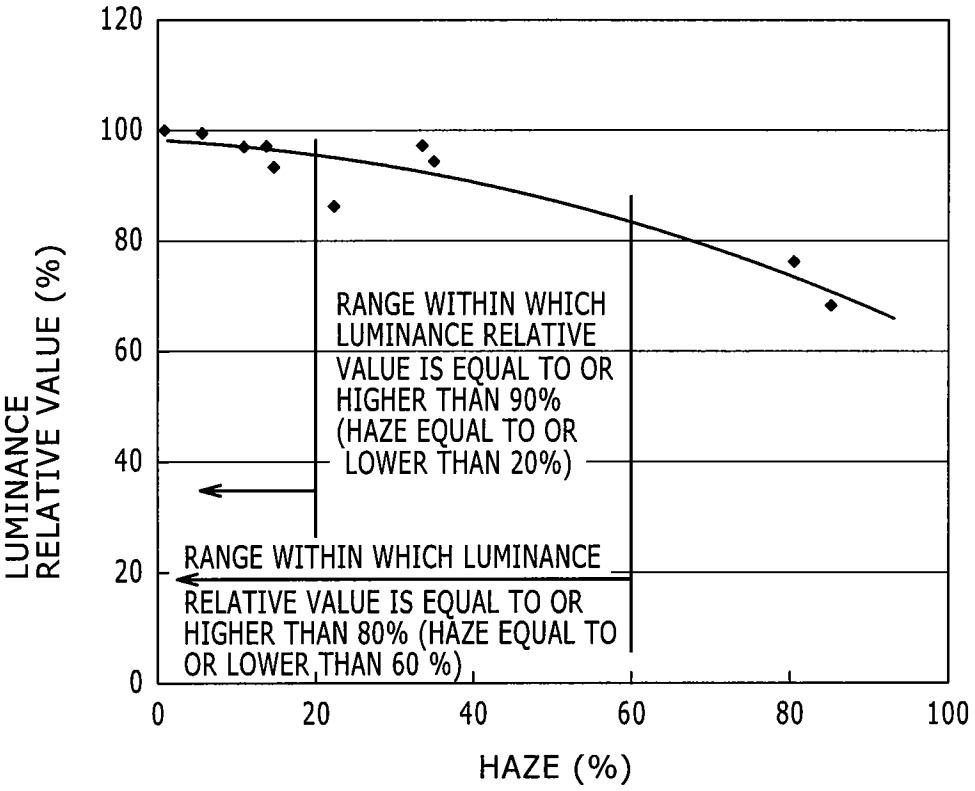
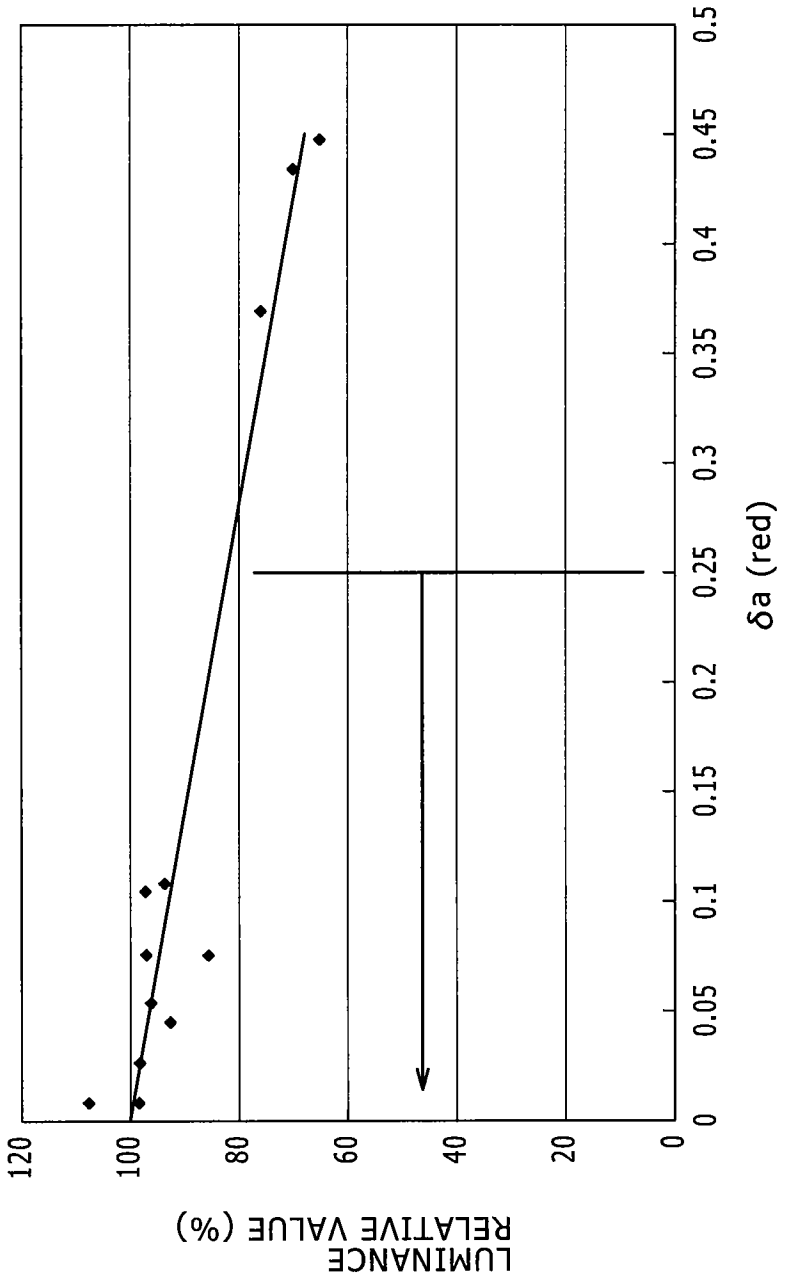

120
100
80
60
40
20
0
LUMINANCE RELATIVE VALUE (%)
RANGE WITHIN WHICH LUMINANCE RELATIVE VALUE IS EQUAL TO OR HIGHER THAN 90% (HAZE EQUAL TO OR LOWER THAN 20%)
RANGE WITHIN WHICH LUMINANCE RELATIVE VALUE IS EQUAL TO OR HIGHER THAN 80% (HAZE EQUAL TO OR LOWER THAN 60 %)
0
20
40
60
80
100
HAZE (%)

FIG.42


LUMINANCE
RELATIVE VALUE (%)
120
100
80
60
40
20
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
δa (red)